REMARKS

Claims 1, 2, 4, 5, 7-13, 15, 16, 18-23, 25, 26, 28-34, 36, 37, and 39-82 are pending, with claims 1, 22, 43, 52, 65, and 74 being independent. Claims 12, 13, 15, 16, 18-21, 33, 34, 36, 37, 39-42, 48-51, and 56-60 are withdrawn, and claims 3, 6, 14, 17, 24, 27, 35, 38, and 83-86 are canceled. Claims 1, 2, 4, 5, 7, 11, 22, 23, 25, 26, 28-32, 43-47, 52-55, and 61-83 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,488,000 to Zhang et al. ("Zhang").

Regarding the rejection of claims 1, 2, 4, 5, 7, 11, 22, 23, 25, 26, 28-32, 43-47, 52-55, and 61-83 under 35 U.S.C. 102(e) as being anticipated by Zhang, Applicant respectfully submits that Zhang does not disclose or properly suggest all of the limitations of at least independent claims 1, 22, 43, 52, 65, and 74, as amended.

For example, amended independent claim 1 recites (with emphasis added):

> A method of manufacturing a semiconductor device comprising the steps of:
>
> forming a crystalline semiconductor film on an insulating surface;
>
> forming an insulating film on said crystalline semiconductor film;
>
> ***introducing a first dopant impurity into said crystalline semiconductor film through said insulating film by a first ion doping***;
>
> annealing said crystalline semiconductor film;
>
> forming a gate electrode over said insulating film; and
>
> ***introducing a second dopant impurity into said crystalline semiconductor film by a second ion doping by using the gate electrode as a mask***,
>
> wherein a peak of a concentration profile of said ***first*** dopant impurity is located in said insulating film.

In rejecting claim 1, the Office Action states that Zhang teaches "introducing a dopant through the insulating film by an ion doping ... (Col. 10, lines 50-68)" (*see* page 2 of the Office Action). Applicant respectfully submits that a reading of the noted portion of Zhang, along with a reading of column 14, lines 47-63, reveals that Zhang, at best, discloses doping for a source

and drain region(s) that arguably corresponds to the process of "... introducing a second dopant ... by a second ion doping ..." recited in claim 1.

Even assuming a validity of this comparison for the sake of argument, Applicant respectfully submits that Zhang does not disclose or suggest the process of "... introducing a first dopant by a first ion doping ...," as recited in claim 1. Specifically, for example, claim 1 requires that the first ion doping occurs before forming of the gate electrode, and further requires that the second ion doping use the gate electrode as a mask. Claim 1 further requires that a peak of concentration profile of the first dopant impurity be located in the insulating film. Since Zhang does not disclose or properly suggest the claimed first ion doping, Zhang subsequently cannot disclose or properly suggest a result of such a first ion doping, with respect to the insulating film or otherwise.

As a result, Applicant submits that independent claim 1 is allowable for at least the above reasons, so that dependent claims 2, 4, 5, 7-11, and 61 are allowable for at least the same reasons. Moreover, independent claims 22, 43, and 52 recite the same or similar limitations, so that these claims, along with their dependent claims 23, 25, 26, 28-32, 44-47, 53-55, and 62-64 are believed to be allowable for at least the same reasons. Applicant notes that the limitations of independent claims 22, 43, and 52 are not necessarily identical to those of claim 1. For example, independent claims 22 and 52 recite that a peak concentration profile of the first dopant impurity is located "above said insulating surface." Nonetheless, the fact remains that, as just mentioned, since Zhang does not disclose or properly suggest the claimed first ion doping, Zhang subsequently cannot disclose or properly suggest any result of the first ion doping.

Similarly, independent claim 65, as amended, recites (with emphasis added):

> A method of manufacturing a semiconductor device having a thin film transistor comprising the steps of:
>
> forming a crystalline semiconductor film on an insulating surface;
>
> forming an insulating film on said crystalline semiconductor film;
>
> ***introducing a first dopant impurity into at least a portion of said crystalline semiconductor film through said insulating film by a first ion doping***;
>
> removing said insulating film after said introducing step;
>
> annealing said crystalline semiconductor film after said removing step; and

introducing a second dopant impurity into said crystalline semiconductor film by a second ion doping,

wherein said portion constitutes a channel region of said thin film transistor,

wherein a peak of a concentration profile of said ***first*** dopant impurity is located in said insulating film.

As set forth above, Zhang does not disclose or properly suggest both of the first ion doping for introducing a first dopant and a second ion doping for introducing a second dopant. In particular, Zhang does not disclose such a first ion doping for introducing the first dopant into a portion constituting a channel region of the thin film transistor, as claimed. Further, as before, since Zhang does not disclose or properly suggest the claimed first ion doping, Zhang subsequently cannot disclose or properly suggest any result of the first ion doping, including the result of "...a peak of a concentration profile of said first dopant impurity (being) located in said insulating film," as claimed.

As a result, Applicant submits that independent claim 65 is allowable for at least the above reasons, so that dependent claims 66-73 are allowable for at least the same reasons. Moreover, independent claim 74 recites the same or similar limitations, so that this claim, along with its dependent claims 75-82, is believed to be allowable for at least the same reasons.

Based on the above, all claims are believed to be in condition for allowance, and such action is hereby requested in the Examiner's next official communication.

Enclosed is a $110.00 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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